

Amendments to the Specification

Please amend the paragraph on p.2 beginning on line 6 as follows:

This application is a continuation-in-part of U.S. patent application no. 09/157,093, filed September 18, 1998, and entitled "METHOD AND APPARATUS FOR ADDRESSING AN ELECTRONIC DOCUMENT FOR TRANSMISSION OVER A NETWORK" NETWORK," which issued as U.S. patent no. 6,154,783 on November 28, 2000.

Please amend the paragraph on page 3, starting on line 6, as follows:

The identification, capture, organization and storage of knowledge resources is a particularly taxing problem. Prior art knowledge management systems have typically implemented knowledge repositories that require users manually to input information frequently into pre-defined fields, and in this way manually and in a prompted manner to reveal their personal knowledge base. However, this approach suffers from a number of drawbacks in that the manual entering of such information is time consuming and often incomplete, and therefore places a burden on users who then experience the inconvenience and cost of a corporate knowledge management initiative long before any direct benefit is experienced. Furthermore, users may not be motivated to describe their own knowledge and to contribute documents on an ongoing basis that would subsequently be re-used by others without their awareness or consent. ~~The manual~~

~~input of such information places a burden on users who then experience the inconvenience and cost of a corporate knowledge management initiative long before any direct benefit is experienced.~~

Please amend the paragraph on page 4, starting on line 11, as follows:

In order to address the problems associated with the manual input of knowledge information, more sophisticated prior art knowledge management initiatives may presume the existence of a centralized staff to work with users to capture knowledge bases. This may however increase the ongoing cost of knowledge management and ~~requires~~ require a larger up-front investment before any visible payoff, thus deterring the initial funding of many ~~an~~ otherwise promising knowledge management initiatives. Even if an initial decision is made to proceed with such a sophisticated knowledge management initiative, the cash expenses associated with a large centralized knowledge capture staff may be liable to come under attack, given the difficulty of quantifying knowledge management benefits in dollar terms.

Please amend the paragraph on page 19, starting on line 4, as follows:

Figure 1 is a block diagram illustrating a knowledge management system 10, according to an exemplary embodiment of the present invention. The system 10 may conveniently be viewed as comprising a client system 12 and a server system 14. The client system 12 may comprise one or more clients, such as browser clients 16 and e-

mail clients 18, that are resident on terminals or computers coupled to a computer network. In one exemplary embodiment, each of the browser clients 16 may comprise the Internet Explorer client developed by Microsoft Corp. of Redmond, Washington, or the Netscape Navigator client developed by Netscape Communications of Menlo Park, California. Each of the e-mail clients 18 may further comprise the Outlook Express, Outlook 97, Outlook 98 or Netscape Communicator e-mail programs. As will be described in further detail below, the browser and e-mail clients 16, 18 are complemented by extensions 19, that enable the browser and e-mail clients 16, 18 to send an electronic message (e.g., either an e-mail or HTML document) to a knowledge server 22 implemented on the server side 14 of the system 10. As shown in **Figure 1**, the extensions 19 may be integral with an e-mail client 18, or external to the client 18 and in communication therewith. The clients 16 and 18 may default to sending every communication to a relevant component of the knowledge server 22, while allowing a user specifically to designate a communication not suitable for transmission to the knowledge server 22. The user designation may be facilitated through controls that are installed as software modules which interact with or modify an e-mail client 18, and which cause messages to be copied to a special e-mail address (e.g., a Knowledge Server (KS) mailbox 25 maintained by a e-mail server 23) associated with a knowledge server component. In the case where a client extension 19 for performing this automatic transmission is not available, the user can manually add the e-mail address of the KS mailbox 25 to the list of recipients for the message. Further details in this regard are provided below. Files embedded within an e-mail message, such as attachments, may also be selectively included or excluded from the capture process

and may also be selectively included or excluded from retention in a knowledge repository.

Please amend the paragraph on page 54, starting on line 20, as follows:

Figure 17E is a flowchart illustrating a method 352, according to an exemplary embodiment of the present invention, for implementing the profile modification process illustrated at step 352 in **Figure 17D**. The method 352 commences at step 362, and then proceeds to display step 364, where the target user is prompted to (1) move a term, on which a "hit" has occurred, between the private and public portions of his or her user knowledge profile, or to (2) delete the relevant term from his or her user knowledge profile. Specifically, the target user may be presented with a user dialog, a HTML-enriched e-mail message, or a Web page, listing the various terms upon which hits occurred as a result of an inquiry, besides which appropriate buttons are displayed that allow the user to designate the term either to ~~the~~ be included in the public or private portion of his or her user knowledge profile, or that allow the user to mark the relevant term for deletion from the user knowledge profile. At input step 366, the target user makes selections regarding the terms in the matter described above. At decision box 368, a determination is made as to whether the user selected terms for transfer between the public and private portions of the user profile, or for inclusion within the user profile. If so, the method 352 proceeds to step 370, wherein the appropriate terms are designated as being either public or private, in accordance with the user selection, by setting appropriate values in the "private flag" column 119 within the user-term table,

as illustrated in **Figure 16B**. Thereafter, the method proceeds to decision box 372, wherein a determination is made as to whether the user has elected to delete any of the terms presented at step 364. If so, the relevant terms are deleted from the user knowledge profile at step 374. The method is then terminates at step 378.

Please amend the paragraph on page 59, starting on line 11, as follows:

The user dialog 440 also presents a list of actual (or confirmed) recipients in three windows, namely a "to:" window 442, a "cc:" window 444 and a "bcc:" window 446. An inquiring user may move recipients between the potential recipients list and the actual recipients lists utilizing the "Add" and "Remove" buttons indicated at 450. The user dialog 440 also includes an array of "select" buttons 452, utilizing which a user can determine the recommendation group to be displayed within the scrolling window 442. The user dialog 440 finally also includes "~~Explained~~Explain Match" and "More" buttons 454 and 456, the purposes of which is elaborated upon below. As shown in **Figure 18D**, the author user may select an "Explain" function for any of the proposed recipients utilizing the "Explain Match" button 454. If it is determined at decision box 412 that this "Explain" function has been selected, the method 400 branches to step 414, as illustrated in **Figure 18B**. Specifically, at step 414, the addressing system 84 propagates a further "Explain" query to the knowledge access server 26 utilizing HTTP, and opens a browser window within which to display the results of the query. At step 416, the knowledge access server 26 retrieves the terms (i.e., the knowledge terms) that constituted the basis for the match, as well as associated confidence level values.

This information is retrieved from the public portion of the relevant user knowledge profile in the knowledge repository 50. At step 418, the information retrieved at step 416 is propagated to the client 18 from the knowledge access server 26 via the web server 20. The information is then displayed within the browser window opened by the e-mail client 18 at step 414. Accordingly, the author user is thus able to ascertain the reason for the proposal of a potential recipient by the addressing system 84, and to make a more informed decision as to whether the proposed recipient should be included within the actual recipients (confirmed addressee) list.

Please amend the paragraph on page 60, starting on line 16, as follows:

The user also has the option of initiating a "More" function by selecting the "More" button 456 on the user dialog 440, this function serving to provide the user with additional proposed recipients. Accordingly, a determination is made at step 422 as to whether the "More" function has been selected by the author user. If so, the method 400 branches to step 424 as shown in **Figure 18C**, where the client 18 propagates a "More" request to the knowledge access server 20 in the same manner as the "Explain" query was propagated to the knowledge access server at step 414. At step 46426, the knowledge access server 26 identifies further potential recipients, for example, by using a threshold value for the "matching metric" that is lower than a threshold value utilized as a cutoff during the initial information retrieval operation performed at steps 406 and 408. At step 428, the knowledge access server 26 then transmits the list of further potential recipients, and associated information, to the e-mail client 18. At step 430, the

list of additional potential recipients is presented to the author user for selection in descending order according to the "matching metric" associated with each of the potential recipients.

Please amend the paragraph on page 62, starting on line 4, as follows:

Figure 19 is a flow chart illustrating a method 500, according to one exemplary embodiment of the present invention, of managing user authorization to publish, or permit access to, a user knowledge profile. The method 500 is executed by the case controller 45A that tracks open "cases" and initiates notification to users concerning the status of such cases. For the purposes of the present specification, the term "case" may be taken to refer to a user authorization process for publication of, or access to, a user knowledge profile. The method 500 commences at step ~~502~~ 501, and then proceeds to step ~~504~~ 502, where a match is detected with a private portion of a user knowledge profile. At step 504, the case controller 45A then opens a case, and notifies the target user at step 506 concerning the "hits" or matches between a document (or query) term and a knowledge term in a knowledge user profile. This notification may be by way of an e-mail message, or by way of publication of information on a Web page accessed by the user. At step 508, the case controller 45A determines whether an expiration date, by which the target user is required to respond to the hit, has been reached or in fact passed. If the expiration date has passed, the case controller 45A closes the case and the method 500 terminates. Alternatively, a determination is made at decision box 510 as to whether the target user has responded to the notification by

authorizing publication of, or access to, his or her user knowledge profile based on the hit on the private portion thereof. If the target user has not authorized such action (i.e., declined authorization), an inquiring user (e.g., the author user of an e-mail or a user performing a manual database search to locate an expert) is notified of the decline at step 512. Alternatively, should the target user have authorized publication or access, the inquiring user is similarly notified of the authorization at step 514. The notification of the inquiring user at steps 512 or 514 may be performed by transmitting an e-mail to the inquiring user, or by providing a suitable indication on a web page (e.g., a home page or search/query web page) accessed by the inquiring user. At step 516, the appropriate portions of the user profile pertaining to the target user are published to the inquiring user, or the inquiring user is otherwise permitted access to the user profile. At step 518, the case controller 45A then closes the case, whereafter the method terminates.

Please amend the paragraph on page 64, starting on line 9, as follows:

Referring to **Figure 20**, there is illustrated the exemplary method 550 of assigning a confidence value to a term. The method 550 commences at step 552, whereafter an initial confidence memory value (as distinct from a confidence level value) is assigned a zero (0) value. At step 556, a confidence level value for a term is calculated utilizing, for example, the method 154 ~~illustrates~~ illustrated in **Figure 9**. However, this confidence level value is only calculated for occurrences of the relevant term within a particular time or document window. For example, in summing the

adjusted count values at step 190 within the method 154, the adjusted count values for only documents received within a predetermined time (e.g., the past 30 days), or only for a predetermined number of documents (e.g., the last 30 documents) are utilized to calculate the summed adjusted count value. It will be appreciated that by discarding documents, which occurred before the time or document window, the effect on the confidence level values for aged terms by the absence of such aged terms within recent documents may be reduced.

Please amend the paragraph on page 65, starting on line 16, as follows:

Figure 22 is an exemplary user-term table 112, according to one embodiment of the present invention, that is shown to include a confidence level column 118, a confidence memory value column 121, and a time stamp column 123. The table 112 records a confidence level value and a confidence memory value for each user-term pairing within the table 112, and it is to this table that the confidence level values and the confidence memory values are written by the method 550. The time stamp column 123 records a date and time stamp value indicative of the date and time at which the corresponding confidence memory value was last updated. This value will accordingly be updated upon the overwriting of the confidence memory value at step 560.

Please amend the paragraph on page 66, starting on line 14, as follows:

Figure 21 is a flowchart illustrating an exemplary method 570, according to one embodiment of the present invention, of determining or identifying a confidence value (e.g., either a confidence level value or a confidence memory value) for a term. The method 570 may be executed in performance of any of the steps described in the preceding flow charts that require the identification of a confidence level value for a term in response to a hit on the term by a document term (e.g., in an electronic document or other query). The method 570 commences at step 572, and proceeds to step 574, where a confidence level value for a term within a user profile is identified. For example, the confidence level value may be identified within ~~be the~~ user-term table 112 illustrated in **Figure 22**. At step 576, a confidence memory value for the term may then also be identified, again by referencing the user-term table 112 illustrated in **Figure 22**. At decision box 578, a determination is then made as to whether the confidence level value is greater than the confidence memory value. If the confidence level value is greater than the confidence memory value, the confidence level value is returned, at step 580, as the confidence value. Alternatively, should the confidence memory value be greater than the confidence level value, the confidence memory value is returned, at step 582, as the confidence value. The method 570 then terminates at step 584.

Please amend the paragraph on page 71, starting on line 14, as follows:

Referring specifically to **Figure 24C**, an alternative embodiment of the user dialog 440, shown in **Figure 18D**, is illustrated. Specifically, the dialog block 712,

illustrated in **Figure 24C**, in addition to providing a list of potential (or suggested) recipients within a "suggested recipients" scrolling window 714, presents a "selected terms" window 716. Within the "selected terms" window 716, the desktop application, utilizing information received from the knowledge server 22, presents to the sending user an indication of the correspondence between the contents of the communication (e.g., the e-mail) and one or more descriptive profiles for proposed recipients identified within the "suggested recipients" window 714. Specifically, in the exemplary embodiment illustrated in **Figure 24C**, terms within a draft e-mail that have been identified as corresponding to terms within the descriptive profiles of the suggested recipients are visually differentiated (e.g., highlighted or underlined) from the rest of the content of the e-mail. In this way, the sending user is conveniently able to identify terms within the draft e-mail that have resulted in the suggestion of the recipients shown in the window 714. It will be appreciated that the portions of the e-mail that ~~mail corresponded~~ may correspond to descriptive profiles could be communicated in any number of ways. For example, a separate and distinct listing of such terms may be presented in a distinct window.

Please amend the paragraph on page 73, starting on line 7, as follows:

Figure 24E illustrates a feature whereby user-selection of a name within the "suggested recipients" window 714 causes one or more terms within the "selected terms" window 716 to be identified (e.g., by visual differentiation) so that the sending user can conveniently determine which content of the communication (e.g., the e-mail)

corresponds to published (or public) terms within the descriptive profile of the identified user. For example, the user selection of the name "Joe" 718 within the window 714 may cause the term "KnowledgeMail" 720 within the window 716 to be highlighted. In this way, the sending user can conveniently select or deselect ~~deselect~~ suggested recipients as actual recipients on the basis of terms within the communication based on the relevance or interest to the sending user.

Please amend the paragraph on page 76, starting on line 1, as follows:

User selection of the option 744 in **Figure 26B** invokes the browser client 16, and ~~to direct~~ directs the browser client 16 to issue a request to the web server 20 (e.g., a HTTP request embodying a URL) for access to the portal interfaces generated by the web server 20. **Figure 26C** illustrates an exemplary portal interface 750, in the form of a markup language document, which is shown to present user-selectable home, search, KnowledgeSweep, Personal Profile and Preferences options.

Please amend the paragraph on page 76, starting on line 8, as follows:

Figure 26B- 26D illustrates an exemplary search interface 752, generated responsive to user selection of the search option in the portal interface 750. The search interface 752 is shown to include a search term input field 754 via which a user may attempt to locate descriptive profiles including published terms corresponding to